

Appln No. 10/728783
Amdt. Dated: January 19, 2007
Response to Office Action of December 6, 2006

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REMARKS/ARGUMENTS

Applicant thanks Examiner for the detailed Office Action dated December 6, 2006. In response to the issues raised, the Applicant offers the following submissions and amendments.

Amendments

Claims 1, 9 and 25 been amended to define that the wafer is a monolithic substrate for the nozzles and it is etched by ion etching. The entire specification is directed to the fabrication of printheads on monolithic wafers using, *inter alia*, reactive ion etching in a plasma chamber. In particular, the detailed description of Figures 2-7 discusses the problems associated with ion etching through a wafer and how the invention addresses these issues.

Claims 1 and 25 have been amended to address the grammatical error identified by the Examiner.

Claims 26 to 32 have been amended to depend from claim 25 instead of withdrawn claim 17.

Accordingly, the amendments do not add any new matter.

Claim Objections

As discussed above, the amendments address the grammatical errors of claims 1 and 25. However, claim 24 has been withdrawn from consideration and therefore the objection is moot. Furthermore, the dependencies of claims 26 to 32 have been corrected.

35 USC §103 - Claims 1 to 16 and 25

Claims 1 to 16 and 25 stand rejected as obvious in light of US 5,790,155 to Usui et al.

Amended claims 1, 9 and 25 restrict the invention to printheads fabricated on a monolithic wafer. The liquid passages are ion etched through the wafer from both sides so that the hole

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in the ejection side is smaller than the passage etched from the supply side. This provides a reliable fluid communication between the nozzles and the opposite side of the wafer, which avoids the need for ink distribution conduits on the ejection side of the wafer. Skilled addressees will readily appreciate that the density of nozzles on the wafer is greatly improved if valuable wafer real estate is not occupied by distribution conduits.

The Usui printhead is a laminated structure. The nozzles and chambers are not supported on a monolithic wafer that is ion etched from both sides. Furthermore, there is no recognition of the nozzle density benefits of etching through a wafer. Accordingly, it fails to anticipate the invention defined by amended claims 1, 9 or 25.

It follows from the above that dependant claims 2-8, 10-16 and 26-32 are likewise novel and inventive in light of the cited reference.

It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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